

Suzanne Phinney Comments on the Full Fuel Cycle Analysis WTT, TTW Draft Reports

On pages 2-11 and 4-2, the report indicated that foreign LNG will come from Chile. This is incorrect. The most import likely sources to California are Australia, Indonesia and Russia. As a result, the travel distances are much greater. The report “*LNG Supply Chain Greenhouse Gas Emissions for the Cabrillo Deepwater Port: Natural Gas from Australia to California*”, includes the following assumptions:

Assuming Scarborough/Pilbara as the origination of the gas and LNG, CMS estimates a trade route of 9,100 miles, or 7,908 nautical miles, each way. LNG carriers recently delivered from shipyards typically achieve 19.5 knots (though this will vary by trade route).²⁰ means a voyage of 406 hours, or almost 17 days en route. CMS modeled three fuel scenarios as follows:

1. Gas-only mode that used LNG boil-off gas plus an additional quantity of vaporized natural gas sufficient to fuel the engines: 430 gCO₂/kWh times 18.1 million kWh for each one-way trip = 7,800 tonnes of CO₂, consuming 6,740 m³ of LNG en route;
2. Dual-fuel mode that burned boil-off gas at the normal rate supplemented with diesel fuel at 630 gCO₂/kWh, which means a blended rate of 529 gCO₂/kWh → 9,590 tonnes of CO₂ and the consumption of 3,420 m³ of LNG en route (of which the boil-off gas, at 0.15 percent per day, would supply approximately 54 percent of the required fuel);
3. Diesel-only mode at 630 gCO₂/kWh resulting in 11,430 tonnes of CO₂ for each one-way trip, with zero LNG consumption. Note: this assumes re-liquefaction of the boil-off gas, which requires on-board compressors and a power requirement of up to 3.5 MW.

On page 3-11, at the end of Section 3.2.3, the sentence should be revised as follows: LNG terminals in the U.S., are located in Everett, Massachusetts; Cove Point, Maryland; Elba Island, Georgia; Port Charles, Louisiana; and in the Gulf of Mexico. There is also an LNG terminal in Penuelas, Puerto Rico.

On page 45-5 Section 4.1.4, footnotes and text changes should be added/made as follows:

Several locations for LNG facilities continue to be examined including facilities in Southern California, Baja California¹, and Oregon.

Change first sentence of the second paragraph to the following:

There is a possibility that LNG vehicle fueling may come from LNG import terminals. About 1% of the LNG supply from the proposed LNG terminal in the Port of Long Beach would be used for vehicle fueling.²

¹ Construction of Semptra’s Costa Azul LNG terminal in Baja is 75% complete

² The final environmental documents for this project are expected to be released in early 2007, whereupon the applicant’s license will be either approved or disapproved.